

EFFICACY STUDY REVIEW

by Kevin J. Sweeney, Entomologist - IB

Kevin J. Sweeney
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To: Linda DeLuise

Date: July 18, 2003

EPA Reg. No. or File Symbol: 1021-1758

Product Name: Evercide 2.5% Permethrin Concentrate

Registrant: MGK

PM: George LaRocca, PM 13

S#: S630527

DP: D288679

Action: 305

Chemical: 2.5% Permethrin

Type: RTU (I) Insecticide

OPPTS Guidelines: 810.34/35

GLP?: No.

Sites: outdoor residential sites. Used in non-food and food areas. The product is also labeled for treatment of indoor plants.

Pests: many crawling and flying pests.

Application rates: This concentrate is RTU with a hose end sprayer (Ready-Spray System) but can also be used with a pump-up pressure sprayer or a watering can. The application rate ranges from 1 quart per 1,900 square feet to 1 quart per 5,300 square feet.

MGK submitted an amended label and data to support "kills" claims for mosquitoes that vector West Nile virus. The label also has a disclaimer "...has been proven to kill species of mosquitoes

known to carry WNV. However, as with all insect controls, Evercide 2.5 Permethrin Concentrate/Repellent does not achieve 100% control of the insects.”

Submitted Study:

MRID 45866801 Evercide 2.5% Permethrin Concentrate/Repellent Product Performance Report: Evaluation of Efficacy of Permethrin Spray (EPA Reg. No. 1021-1758) Against *Culex quinquefasciatus* by Venkat Pedibhotla and David Nielson.

Entomologist's Comments and Recommendations:

1. The study is acceptable. Two hours following surface treatment to mosquito cages with the subject product, female *Culex quinquefasciatus* were exposed for 24 hours. The finished product was sprayed on the cage at the rate of 6.2ml/square foot. The experiment consisted of a treatment with five replicates and one untreated control. Each replicate consisted of 10 adult female *Cx. quinquefasciatus*. Knockdown and mortality were observed at 5, 15 and 60 minutes after the exposure was initiated. Observations were also made at 24 hours and 45 hours post-exposure (study says treatment but this is probably a mistake). Mosquitoes were reported to be moribund at 30 minutes and all were dead at 24 hours post-exposure. The data table reports mean results but the text described the 100% mortality result.

2. The submitted study supports the label claims as follows:

- a. “Kills mosquitoes that (which/may) transmit West Nile virus.” Acceptable.
- b. “Controls/kills mosquitoes that/which may transmit West Nile virus” Acceptable, provided the disclaimer is on the front panel of the label. As noted in the disclaimer, the product will not be 100% effective controlling WNV vectors.
- c. “Aids in reducing annoyance from mosquitoes and other flying insects.” Acceptable.